EXHIBIT 9

Additional tech-enabled opportunities

Discussion document

March 2023

DOLLAR GENERAL

Executive summary

- Throughout M^3, technology discussions were focused on supporting the point solutions, system changes, and foundational enablers that were required for solution deployment
- These discussions also raise gaps in the current technology stack that are likely impacting the business today
- As an example, on-shelf out-of-stocks (OOS) across Dollar General is currently 23% with 450 – 500 bps ($100 – 140M EBITDA impact) estimated to be driven by issues in technology, namely:
  - Manual POs which create discrepancies on product supply
  - Demand forecasting based on shipments (lagging to incorporate demand or sales and dismisses OOS / lost sales) which prevents stores from receiving adequate volumes of high-velocity items
  - Integration gaps between WMS and TMS, which have led to mis-shipments of product (e.g., sending product to the wrong stores)
- Capturing the OOS value requires collaboration across functions, and there are potentially other areas of opportunity as well; these require input and brainstorming, which will be discussed today

TODAY: Gaps in tech capabilities are driving business challenges

Current tech capabilities, business challenges, and gaps *(see Appendix for full list of opportunities)*

DG comparison to best-in-class retailers Lagging — DG — Best-in-class

Sourcing	Financial planning	Assortment planning	Space & floor planning	Demand forecast	Order management	Replenishment & allocation	Price & promos
Tech / tools utilized							
Manual	JDA	*Manual*	BlueYonder, Intactix	*Manual via GOLD*	*Manual via GOLD*	*Manual via GOLD, IP*	MAPS
<u>Tech</u> capability against best practice *(not exhaustive)*							
DG	DG	DG	DG	DG	DG	DG	DG
Manual vendor onboarding and limited validation of data quality	Merch planning not tied to enterprise planning	Assortment line built based on customer preferences but lacking localized assortment analytics	Floor plan data not connected to assortment / POG planning. Non-core items do not have POGs	Shipment-based, heuristic forecasts rather than sell-through Ineffective prediction of demand for new products	Inaccurate / missing POs to suppliers driven by manual PO management and creation	Poor inventory quality and visibility Serial, batch-driven replenishment Lack of network-wide system driven process for loading containers Receiving scans only at delivery/manifest level	Unreliable price execution (Revionics utilized for price strategy); execution challenges based on data availability and connectivity with POS
<u>Business</u> impact and challenges *(not exhaustive – see appendix for more details)*							
Inaccurate and missing product data	No visibility into sales, margin, and inventory	Finding the right assortment for cut-ins and resets takes >4wks	Inaccurate POGs driving OOS and/or over inventory	~30-35% of SKUs do not sell within 1 week	80% of Purchase Orders require manual approval	Store OOS and over stock from over and under-shipments from DC	Price label changes time-consuming and disconnect with POS

These business challenges are driven by a mix of upstream technology issues – OOS and pricing examples

Main technology dependencies for OOS

Deep-dive to follow

Sourcing	Financial planning	Assortment planning	Space & floor planning	Demand forecast	Order management	Replenishment & allocation	Price & promos

Tech capability against best practice *(not exhaustive)*

Sourcing	Financial planning	Assortment planning	Space & floor planning	Demand forecast	Order management	Replenishment & allocation	Price & promos
DG	DG	DG	DG	DG	DG	DG	DG
Manual vendor onboarding and limited validation of data quality	Merch planning not tied to enterprise planning	Assortment line built based on customer preferences but lacking localized assortment analytics	Floor plan data not connected to assortment / POG planning. Non-core items do not have POGs	Shipment-based, heuristic forecasts rather than sell-through Ineffective prediction of demand for new products	Inaccurate / missing POs to suppliers driven by manual PO management and creation	Poor inventory quality and visibility Serial, batch-driven replenishment Lack of network-wide system driven process for loading containers Receiving scans only at delivery/manifest level	Unreliable price execution (Revionics utilized for price strategy); execution challenges based on data availability and connectivity with POS

Potential impact

TBD — A — ***High*** *(400-500 BPS of OOS)* — B — *TBD*

A. On-shelf OOS at stores is currently 23%, and is driven by 5 root causes – three have a dependency on upstream technology

Deep dive to follow

Root causes of on-shelf OOS	OOS, bps	Outs, %	Upstream technology challenges	Level of technology dependency
OOS at DC/Supplier	900	40%	• Poor inventory quality and visibility • Inaccurate/missing POs to suppliers	**High**
Inaccurate visibility of stock in-store	700	30%	• Manual batched on-hand adjustments • Poor in-store inventory tracking	**Low –** *addressed in M[3]*
Gaps in sales forecast accuracy and replenishment execution	250	10%	• Shipment-based heuristic forecasts • Serial, batch-driven replenishment • Ineffective prediction of demand for new products	**Medium**
Mis-shipments on incoming deliveries	250	10%	• Lack of system-directed container loading • Ineffective digital receiving verification at store	**Medium**
Shrink and damage	200	10%	• *Limited technology intervention opportunity*	**Low**
Total	**2300**	**100%**		

Source: DG stores visits - 16 stores across three markets (San Antonio, TX, Rockford, IL, and Nashville, TN); DG data from Stores Ops; AP and Finance teams

A. We estimate that 450 – 500 bps of OOS is driven by technology issues ($100 – 140M EBITDA impact[1])

PRELIMINARY AND FOR DISCUSSION

Root causes of on-shelf OOS	Upstream technology challenges	Technical limitations	Issues this creates	Addressable OOS, bps
OOS at DC/Supplier **~900**	Poor inventory quality and visibility	No single source of truth for perpetual inventory. No event-based integration with inventory execution systems. Poor visibility into vendor-inbound and in-transit inventory	Inaccurate available-to-promise inventory count	**150 – 200** *(15-25%)*
	Inaccurate/missing POs to suppliers	POs once created in GOLD and IP are not editable leading to proliferation of reference POs which in turn leads to manual error-prone intervention by the demand chain team. Inability to multi-source, determine accurate min order quantities, and incorporate supplier updates	Inability to react to vendor-side supply disruptions and changes after order creation	
Gaps in sales forecast accuracy and replenishment execution **~250**	Shipment-based heuristic forecasts	Demand forecasts are based on historical DC to store shipments and lags in accounting for OOS, sales patterns, and mis-ships Inability to forecast into the future (e.g., 6-9mo) hamper business planning teams	Insufficient on-hand inventory to meet demand	**225 – 250** *(90-100%)*
	Serial, batch-driven replenishment	Replenishment executed serially in batches instead of network-level inventory allocation Replenishment plans do not extend into the future	Stores are over and under allocated inventory	
	Ineffective prediction of demand for new products	Low accuracy algorithm used to predict potential demand for new products		
Mis-shipments on incoming deliveries **~250**	Low system-driven outbound loading	Lack of network-wide system-directed processes for loading containers results in items being sent to wrong store	Containers loaded onto incorrect delivery route	**25 – 50** *(10-20%)*
	Ineffective digital receiving verification at store	Receiving scans only at the delivery / manifest level; no container-level scanning	Rolltainers, totes, toppers unloaded at incorrect store	

1. Based on M3 correlation, 1 bps improvement in OOS equals $1.4M in topline revenue; 15-20% will translate to EBITDA impact

Source: Interviews with DG IT

A. How capabilities need to change to address upstream tech challenges

**Addressable OOS**, bps

Root causes of on-shelf OOS	Where we are today	Systems impacted	What would we need to change to
OOS at DC/Supplier **150 – 200**	**Poor inventory quality and visibility**; no single source of truth for perpetual inventory with only daily store updates	GOLD, IP, WMS, Project 44	**Centralized, accurate inventory visibility platform** with event-based integration across inventory sources (e.g., store, DC, inbound) – *POC in progress*
	Inaccurate/missing POs to suppliers driven by manual PO management and creation	GOLD, IP	**Automated order management system** that connects forecasts and inventory inputs to create and manage orders *(Active initiative to eliminate reference POs in progress)*
Gaps in sales forecast accuracy and replenishment execution **225 – 250**	**Shipment-based, heuristic forecasts** rather than sell-through; system unable to keep pace with business complexity	GOLD (DFAI)	**Sales +3rd party data, predictive forecasting** based on sell through data (existing GOLD system lacks capability) *(POC in progress)*
	Serial, batch-driven replenishment resulting in over/under-allocation of inventory to stores	GOLD / IP	**Automated inventory management with dynamic inventory allocation** that optimizes across the network **Supply chain control tower interface** that simultaneously coordinates across all core supply chain systems
Mis-shipments on incoming deliveries to store **25 – 50**	**Lack of network-wide system-directed processes** for loading containers	Catalyst WMS + BY TMS	**Network-wide enforcement of directed loading process to** ensure cases and totes are scanned to the right destinations
	Receiving scans only at the delivery / manifest level	WMS / TMS / GOLD / HHT Inv. Mgmt	**Container-level digitized receiving process** to validate full shipment and update real-time inventory system

B. Significant potential value at stake to solve wide-range of pricing execution challenges

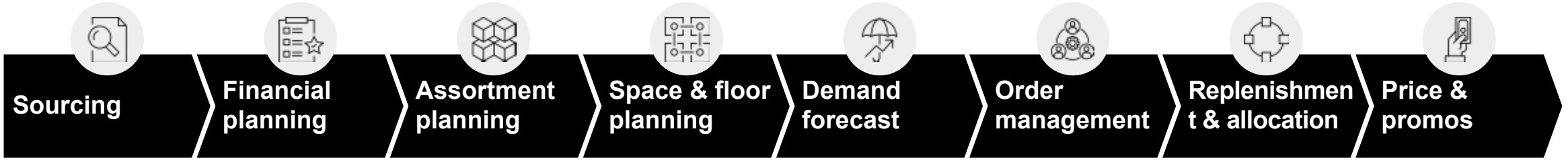
Pricing execution challenges	Impact	Upstream technology challenges	Level of technology dependency
Fragmented pricing data across multiple systems (price data integrity)	*To be sized*	• No single source for pricing data • Legacy integration between AS/400 Island Pacific and GOLD Pricing • Differences across banners (e.g., pOpshelf)	**High**
Prices not updated in in-store systems		• Multiple points of failure distributed across systems • Lack of system synchronization • Existing mechanism to push price updates requires batch processing over multiple days	**High**
Unreliable pricing compliance		• Manual scheduling of price updates with lack of tools to track dependencies and active changes • Lack of pricing audit capabilities and alerting to notify of pricing issues • Multiple paths to print updated price labels (e.g. Westcom, in-store printer)	**High**

B. How capabilities need to change to address upstream pricing execution challenges

Pricing execution challenges	Where we are today	Systems impacted	What would we need to change to
Fragmented pricing data across multiple systems (price data integrity)	• No single source for pricing data • Legacy integration between AS/400 Island Pacific and GOLD Pricing • Differences across banners (e.g., pOpshelf)	Island Pacific, GOLD	**Develop unified price platform as single source of truth for pricing data** (e.g., migrate alcohol retail pricing from Island Pacific to GOLD)
Prices not updated in in-store systems	• Multiple points of failure distributed across systems • Lack of system synchronization • Existing mechanism to push price updates requires batch processing over multiple days	GOLD, NextGen / Legacy POS, DGC, ODS, Flooid	**Develop reliable, real-time price delivery integration** between upstream and in-store systems (e.g, personalization offer management system and NextGen POS) **Deploy active monitoring and alerting solution** to identify break-downs in the price delivery process
Unreliable pricing compliance	• Manual scheduling of price updates with lack of tools to track dependencies and active changes • Lack of pricing audit capabilities and alerting to notify of pricing issues • Multiple paths to print updated price labels (e.g. Westcom, in-store printer)	Island Pacific, GOLD, NextGen / Legacy POS	**Develop audit capability** to identify errors in pricing data and alerts to fix store pricing data quickly **Develop centralized workflow module** to track progress of pricing updates and ensure processes are executed in-sync

TOMORROW: Greater tech maturity and use of data & analytics can unlock new business capabilities

Proposed target and near-term solutions – *preliminary view*



Target state tech / tools

Full automated and interconnected platform

Tech best-in-class capability

Sourcing	Financial planning	Assortment planning	Space & floor planning	Demand forecast	Order management	Replenishment & allocation	Price & promos
Automated vendor onboarding and data management	Automated, customer-backed, localized assortment tailored by and forecast planning and analytics	Digitalized space and floor plans, integrated with POG planning	Predictive forecasting based on POS and 3rd party data	Automated, intelligent order management (dynamically manage POs)	Optimized replenishment utilizing near real-time inventory single source of truth	Single source of truth for pricing data with synchronized, real-time updates to store systems

Business capability impact

Sourcing	Financial planning	Assortment planning	Space & floor planning	Demand forecast	Order management	Replenishment & allocation	Price & promos
Enhanced planning and execution based on up-to-date vendor data	Product offerings in each store optimized for local customer preferences	Efficient POG execution and enablement of store-friendly replenishment at shelf-level	Optimized on-hand inventory to meet customer demand	Accurate, efficient order updates and tracking with visibility into order fulfillment	Optimized store inventory minimizing OOS and efficiently utilizing in-store storage	Reduced store labor and operationalization of pricing analytics insights

Next steps

- Identify other major value levers in conjunction with cross-functional partners
- Continue refining the potential across the major value levers
- Prioritize technology areas based on potential value unlock, and create a roadmap to modernize the technology stack
- Identify “quick win” areas to start unlocking value

APPENDIX

Detailed assessment and challenges (1/2)

Current tech capabilities, business challenges, and gaps

DG comparison to best-in-class retailers

Lagging — DG — Best-in-class

Current capability Gap to best practice	Tech / tools	Business challenges	Root cause
Sourcing DG	Manual	Inaccurate and missing product data (driving inefficiency, extra labor, and delays) Lost sales due to human error (e.g., face masks with no expiry date during COVID) Domain knowledge lost or unknown	Vendor onboarding manual and limited validation of data quality No enterprise visibility to the process and state of item negotiations and compliance
Financial planning DG	Anaplan	No consistent understanding of forecast accuracy inaccurate category investment decision (e.g, some POs not received in timely manner; inaccurate forecast) Inaccurate forecasts due to siloed assortment and financial planning	No common definition and measurement of forecast accuracy Incorrect IMU calculations driving data inaccuracies into planning tool Enterprise and financial planning not integrated with core assortment platform
Assortment planning DG	Manual	>50% of assortment changes for cut-ins	Assortment decided based on DC inventory rather than customer preferences and feedback (sales forecasts not fed into assortment and financial planning. Therefore, assortment choices made de-coupled from category targets) Planning also based on manual analysis of forecast, space, and Nielsen data No integration with financial planning and no governance to re-assess assortment impact
Space & floor planning DG	BlueYonder, Intactix	Inaccurate POGs driving OOS and/or over inventory	Manual processes – CAD drawings manually managed and updated CAD drawing recommendation and space planning not integrated (therefore missing feedback loop to update space plans) No proper floor planning tool in place with no feedback on performance (CAD diagram directly fed into space planning)

Detailed assessment and challenges (1/2)

Current tech capabilities, business challenges, and gaps

DG comparison to best-in-class retailers

Lagging — DG — Best-in-class

Current capability Gap to best practice	Tech / tools	Business challenges	Root cause
Demand forecast DG	*Manual via GOLD*	~30-35% of SKUs do not sell within 1 week Inaccurate demand forecast Inability to conduct forecasts frequently and iteratively due to lack of scalability	Forecast based on DC forecast (rather than customer sales pattern, lost sales, and mis-ships) - this is a constrained demand and can easily be error prone given many supply chain constraints Based on hierarchical models which require years of data with every run and rather than deltas Forecast complexity due to new item forecasts, stores added every 2-3 weeks
Order management DG	*Manual via GOLD*	Invalid POs and limited PO visibility by DCs Inaccurate projection of orders at DC level 80% of Purchase Orders require manual approval Inefficiency created due to significant use of reference POs	POs manually created with no proper governance Non-standard PO creation and orchestration Lack of order traceability Inability to multi-source, recognize MOQs, consider when an order will arrive, and supplier factory changes
Replenishment & allocation DG	*Manual via GOLD, IP*	Store OOS and over stock from over and under-shipments from DC	No single source of truth for inventory and lack of accurate, real-time inventory Replenishment conducted in batches No long-term planning Based on DC inventory and forecast rather than a rollup from Store Replenishment
Price DG	MAPS	Legal and compliance risks Long lead times between price change and label updates (and therefore stores not having the right price at time of store opening) Items occasionally sell at lower price than expected	No single source for pricing data (complex and convoluted pricing system with multiple points of failures) Lack of a price audit process and collection Lack of visibility to markdown prices on discontinued items